



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

215 Fremont Street
San Francisco, Ca. 94105

JUN 28 1988

IN REPLY A-3-1
REFER TO: NSR 4-4-11
 SE 87-01

Mr. W. Phillip Reese
Reese-Chambers Systems
Consultants
P.O. Box 8
Somis, CA 93066

Dear Mr. Reese:

In accordance with provisions of the Clean Air Act, as amended (42 U.S.C. 7401 et seq.), the Environmental Protection Agency has reviewed the application submitted by Colmac Energy, Inc. for the construction and operation of a 49 MW biomass-fired power plant to be located in Riverside County, California.

A request for public comment regarding EPA's proposed action on the above application has been published. Enclosed is a copy of EPA's response to those significant comments received. After consideration of the expressed view of all interested persons (including State and local agencies), and pertinent Federal statutes and regulations, the EPA hereby issues the enclosed Approval to Construct/Modify a Stationary Source for the facilities described above. This action does not constitute a significant change from the proposed action set forth and offered for public comment.

The Consolidated Permit Regulations (40 CFR Part 124) which were promulgated by the Environmental Protection Agency require that we notify interested parties of the permit issuance and advise them that they may petition the Administrator of the Environmental Protection Agency to review any condition of the permit decision.

The petition shall include a statement of the reasons supporting that review, including a demonstration that any issues being raised were raised during the public comment period to the extent required by these regulations and when appropriate, a showing that the condition in question is based on:

- (1) A finding of fact or conclusion of law which is clearly erroneous;
- (2) An exercise of discretion or an important policy consideration which the Administrator should, in his or her discretion, review.

An appeal to the Administrator for review of the permit decision must be filed not later than thirty (30) days from the date the final permit is issued.

This Approval to Construct/Modify shall take effect thirty (30) days from the date it is received by Colmac Energy, Inc.

If you have any questions regarding this matter, please contact Bob Baker of our New Source Section at (415) 974-9209.

Sincerely,



David P. Howekamp
Director
Air Management Division

Enclosures

cc: CARB
SCAQMD

APPROVAL TO CONSTRUCT/MODIFY
A STATIONARY SOURCE

In compliance with provisions of the Clean Air Act, as amended (42 U.S.C. 7401 et seq.), Colmac Energy, Inc. is granted approval to construct a 49 MW biomass-fired power plant to be located on the Cabazon Indian Reservation near Mecca in Riverside County, California, in accordance with the plans submitted with the application and with the Federal regulations governing the Prevention of Significant Air Quality Deterioration (40 CFR 52.21) and other conditions attached to this document and made a part of this approval.

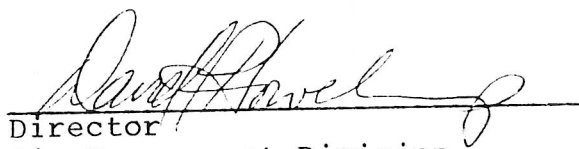
Failure to comply with any condition or term set forth in this approval will be considered grounds for enforcement action pursuant to Section 113 of the Clean Air Act.

This Approval to Construct/Modify a stationary source grants no relief from the responsibility for compliance with any other applicable provision of 40 CFR Parts 52, 60 and 61 or any applicable Federal, State, or local air quality regulations.

This approval shall become effective thirty (30) days from the date received by Colmac Energy, Inc.

Dated: _____

6/23/93



Director

Air Management Division

Permit Conditions

I. Permit Expiration

This Approval to Construct/Modify shall become invalid (1) if construction is not commenced (as defined in 40 CFR 52.21(b)(8)) within 18 months after the approval takes effect, (2) if construction is discontinued for a period of 18 months or more, or (3) if construction is not completed within a reasonable time.

II. Notification of Commencement of Construction and Startup

The Regional Administrator shall be notified in writing of the anticipated date of initial start-up (as defined in 40 CFR 60.2(o)) of each facility of the source not more than sixty (60) days nor less than thirty (30) days prior to such date and shall be notified in writing of the actual date of commencement of construction and start-up within fifteen (15) days after such date.

III. Facilities Operation

All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this Approval to Construct/Modify shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions.

IV. Malfunction

The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in Section IX of these conditions. In addition, the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section IX of these conditions, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause.

V. Right to Entry

The Regional Administrator, the Superintendent of the Southern California Agency of the Bureau of Indian Affairs, and/or their authorized representatives, upon the presentation of credentials, shall be permitted:

- A. to enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of this Approval to Construct/Modify; and
- B. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this Approval to Construct/Modify; and
- C. to inspect any equipment, operation, or method required in this Approval to Construct/Modify; and
- D. to sample emissions from the source.

VI. Transfer of Ownership

In the event of any changes in control or ownership of facilities to be constructed or modified, this Approval to Construct/Modify and all conditions contained herein shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of this Approval to Construct/Modify and its conditions by letter, a copy of which shall be forwarded to the Regional Administrator and the State and local Air Pollution Control Agency.

VII. Severability

The provisions of this Approval to Construct/Modify are severable, and, if any provision of this Approval to Construct/Modify is held invalid, the remainder of this Approval to Construct/Modify shall not be affected thereby.

VIII. Other Applicable Regulations

The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable Federal, State and local air quality regulations.

IX. Special Conditions

A. Certification

Colmac Energy, Inc. shall notify the EPA in writing of compliance with Special Conditions IX.B. and IX.J. and shall make such notification within fifteen (15) days of such compliance. This letter must be signed by a responsible representative of Colmac Energy, Inc.

B. Air Pollution Control Equipment

Colmac Energy, Inc. shall install, continuously operate and maintain the following air pollution controls to minimize emissions. Controls listed shall be fully operational upon startup of the proposed equipment.

1. Each boiler will exhaust to a fabric baghouse, using PTFE or teflon-laminated bags, for the control of particulate emissions (TSP).
2. Each boiler shall be equipped with a limestone injection system for the control of SO_2 and acid gas emissions (H_2SO_4).
3. Each boiler shall be equipped with an ammonia injection system for the control of NO_x emissions.
4. The baled fuel cyclone shall be equipped with a fabric filter for control of particulate emissions.
5. The onsite fuel hog shall be wind enclosed for the control of particulate emissions.
6. The ash handling system shall be completely enclosed, and the ash storage silo equipped with a fabric filter, for the control of particulate emissions. Transfer of ash to a disposal truck shall be enclosed.
7. The cooling towers shall have drift controls installed to limit drift losses to 0.001 percent of the circulating water mass for the control of particulate emissions.

C. Performance Tests

1. Within 60 days of achieving the maximum production rate of the proposed equipment but not later than 180 days after initial startup of the equipment as defined in 40 CFR 60.2(o), and at such other times as specified by the EPA, Colmac Energy, Inc. shall conduct performance tests for NO_x , SO_2 , TSP and CO

and furnish the EPA (Attn: A-3-3) a written report of the results of such tests. The tests for NO_x, SO₂, TSP and CO shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. Upon written request (Attn: A-3-3) from Colmac Energy, Inc., EPA may approve the conducting of performance tests at a lower specified production rate. After initial performance tests and upon written request and adequate justification from Colmac Energy, Inc., EPA may waive a specified annual test for the biomass-fired facility.

2. Performance tests for the emissions of SO₂, TSP, NO_x, and CO shall be conducted and the results reported in accordance with the test methods set forth in 40 CFR 60, Part 60.8 and Appendix A. The following test methods shall be used:
 - a. Performance tests for the emissions of SO₂ shall be conducted using EPA Methods 1-4 and 8.
 - b. Performance tests for the emissions of TSP shall be conducted using EPA Methods 1-4 and 5.
 - c. Performance tests for the emissions of CO shall be conducted using EPA Methods 1-4 and 10.
 - d. Performance tests for the emissions of NO_x shall be conducted using EPA Methods 1-4 and 7.

The EPA (Attn: A-3-3) shall be notified in writing at least 30 days prior to such tests to allow time for the development of an approvable performance test plan and to arrange for an observer to be present at the test.

Such prior approval shall minimize the possibility of EPA rejection of test results for procedural deficiencies. In lieu of the above-mentioned test methods, equivalent methods may be used with prior written approval from the EPA.

3. For performance test purposes, sampling ports, platforms and access shall be provided by the Colmac Energy, Inc. on the boiler exhaust systems in accordance with 40 CFR 60.8(e).
4. Concurrent with the above described performance tests, measurements shall be made of emissions of polycyclic aromatic hydrocarbons (including benzo(a)pyrene), dioxins and furans, and metals. Such measurements shall be in accordance with methods established by the California Air Resources Board.

D. Operating Limitations

1. Only natural gas, propane, or other such gas may be fired by the auxiliary burners.
2. Treated wood or wood wastes, coal or coal byproducts, and municipal solid waste other than wood waste shall not be used as a fuel by this facility.
3. Periodic fuel sampling shall be done to ensure compliance of fuel with permit conditions.
4. The annual input of biomass fuel (agricultural wastes, commercial woodwastes, straw, bermuda grass, asparagus ferns, orchard prunings) to the two (2) boilers shall not exceed 400,000 "wet" tons.
5. Colmac Energy, Inc. shall record and maintain daily records of the amounts and types of biomass fuel fired each calendar quarter, the amount of natural gas fired each calendar quarter, and the plant hours of operation. All information shall be recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, calculation and record.
6. When wind speeds exceed 12 mph, Colmac Energy, Inc. shall control particulate emissions from the fuel storage pile through the use of regular watering.

E. Emission Limits for SO₂

On and after the date of startup, Colmac Energy, Inc. shall not discharge or cause the discharge into the atmosphere SO₂ in excess of the more stringent of 12.0 lbs/hr per boiler or 20 ppm, dry, corrected to 12% CO₂ (3-hour average).

EPA may set a new lower allowable emission rate for the above emission limits after reviewing the performance test results or the initial SO₂ monitoring data required under Special Conditions C and J.

Upon completion of the performance test required under Special Condition IX.C., Colmac Energy, Inc., may request that the above emissions limitations be reduced to more closely reflect actual boiler performance. In such event, the new lower limitations shall form the basis of the emission offset requirements contained in Special Condition IX.L.6.

If the SO₂ emission limit is revised, the difference between the SO₂ emission limit set forth above and a revised lower SO₂ emission limit shall not be allowed as an emission offset for future construction or modification.

F. Emission Limits for TSP

On and after the date of startup, Colmac Energy, Inc. shall not discharge or cause the discharge of TSP in excess of the more stringent of 0.010 gr/dscf at 12% CO₂ or 7.5 lbs/hr per boiler (3-hour average).

On and after the date of startup, Colmac Energy, Inc. shall not discharge or cause the discharge into the atmosphere from the boiler exhaust stack gases which exhibit an opacity of 10 percent or greater for any period or periods aggregating more than three minutes in any one hour.

Upon completion of the performance test required under Special Condition IX.C., Colmac Energy, Inc., may request that the above emissions limitations be reduced to more closely reflect actual boiler performance. In such event, the new lower limitations shall form the basis of the emission offset requirements contained in Special Condition IX.L.6.

G. Emission Limits for CO

On and after the date of startup, Colmac Energy, Inc. shall not discharge or cause the discharge of CO in excess of the more stringent of 45.0 lb/hr per boiler or 173 ppm, dry, corrected to 12% CO₂ (3-hour average).

Upon completion of the performance test required under Special Condition IX.C., Colmac Energy, Inc. may request that the above emissions limitations be reduced to more closely reflect actual boiler performance. In such event, the new lower limitations shall form the basis of the emission offset requirements contained in Special Condition IX.L.6.

H. Emission Limits for NO_x

On and after the date of startup, Colmac Energy, Inc. shall not discharge or cause the discharge of NO_x in excess of the more stringent of 30.0 lbs/hr per boiler or 70 ppm, dry, corrected to 12% CO₂ (3-hour average).

Subsequent to initial full scale operation, Colmac shall conduct an optimization study of the ammonia injection system. The study shall consist of varying the ammonia injection rate to determine the optimal NO_x removal efficiency over an acceptable ammonia slip range of values. Upon completion of the study the EPA may set a new NO_x emission rate and/or a new ammonia injection rate.

Upon completion of the performance test required under Special Condition IX.C., Colmac Energy, Inc. may request that the above emissions limitations be reduced to more closely reflect actual boiler performance. In such event, the new lower limitations shall form the basis of the emission offset requirements contained in Special Condition IX.L.6.

I. Emission Limit for Hydrocarbons

On and after the date of startup, Colmac Energy, Inc. shall not discharge or cause the discharge of hydrocarbons in excess of 10.0 lbs/hr per boiler (3-hour average).

Upon completion of the performance test required under Special Condition IX.C., Colmac Energy, Inc., may request that the above emissions limitations be reduced to more closely reflect actual boiler performance. In such event, the new lower limitations shall form the basis of the emission offset requirements contained in Special Condition IX.L.6.

J. Continuous Emission Monitoring

1. Prior to the date of startup and thereafter, Colmac Energy, Inc. shall install, maintain and operate the following continuous monitoring systems in the boiler exhaust stack:
 - a. Continuous monitoring systems to measure stack gas SO₂, CO and NO_x concentrations. The system shall meet EPA monitoring performance specifications (40 CFR 60.13 and 40 CFR 60, Appendix B, Performance Specifications 2, 3 and 4).
 - b. A continuous monitoring system to measure stack gas volumetric flow rates. The system shall meet EPA performance specifications (40 CFR Part 52, Appendix E).
 - c. A transmissometer system for continuous measurement of the stack gas opacity. The system shall meet EPA monitoring performance specifications (40 CFR Part 60.13 and 40 CFR Part 60, Appendix B, Performance Specification 1).
2. Colmac Energy, Inc. shall maintain a file of all measurements, including continuous monitoring systems evaluations; all continuous monitoring systems or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; performance and all other information required by 40 CFR 60 recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports and records.
3. Colmac Energy, Inc. shall notify EPA (Attn: A-3-3) of the date which demonstration of the continuous monitoring system performance commences (40 CFR 60.13(c)). This date shall be no later than 60 days after startup.

4. Colmac Energy, Inc. shall submit a written report of all excess emissions to EPA (Attn: A-3-3) for every calendar quarter. The report shall include the following:
 - a. The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factors used, and the date and time of commencement and completion of each time period of excess emissions.
 - b. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the furnace/boiler system. The nature and cause of any malfunction (if known) and the corrective action taken or preventive measures adopted shall also be reported.
 - c. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks, and the nature of the system repairs or adjustments.
 - d. When no excess emissions have occurred or the continuous monitoring system has not been inoperative, repaired, or adjusted, such information shall be stated in the report.
 - e. Excess emissions shall be defined as any 3-hour period during which the average emissions of SO₂, NO_x, or CO, as measured by the CEM, exceeds the maximum emission limits set forth in Conditions IX.E, IX.G, and IX.H above. Excess emissions shall also be defined as any period or periods aggregating more than three minutes in any one hour during which the stack gas opacity as measured by the CEM exceeds the limit set forth in Condition IX.F above.
5. Excess emissions indicated by the CEM system shall be considered violations of the applicable emission limit for the purposes of this permit.
6. Not less than 90 days prior to the date of startup of the facility, Colmac Energy, Inc. shall submit to the EPA (Attn: A-3-3) a quality assurance project plan for the certification and operation of the continuous emission monitors. Such a plan shall conform to the EPA document "Guidelines for Developing a Quality Assurance Project Plan" (QAMS 005/80). Continuous emission monitoring may not begin until the QA project plan has been approved by EPA Region 9.

K. New Source Performance Standards

The proposed biomass-fired facility is subject to the Standards of Performance for New Stationary Sources (NSPS) 40 CFR 60, Subparts A, Db and E, including all emissions limits and all notification, testing, monitoring, and reporting requirements.

L. Emission Offset Conditions

1. Colmac Energy, Inc. shall provide offsets for all emissions from the facility.
2. Proper evaluation, calculation, and recordkeeping of the emission credits is the responsibility of Colmac.
3. Colmac shall submit to the BIA and EPA (Attn: A-3-3), upon request, written agreements between Colmac and the supplier of the agricultural/forest wastes, which specify type and quantity of wastes supplied.
4. Colmac shall require and maintain fuel receipts, scale records, and bills of lading for transportation of all forest/agricultural wastes for which offset credit is claimed.
5. The BIA and EPA may inspect fuel receipts and other information necessary to verify that fuel burned at the facility is of adequate quantity and quality to ensure that any credits issued under this condition are in fact being achieved.
6. Onsite emissions from the Colmac plant including maximum permitted facility stack emissions as specified in Conditions IX.E, IX.F, IX.G, IX.H, and IX.I shall be offset in accordance with the ARB/CAPCOA procedure for calculating offsets. The emission offset credit shall be calculated using the ARB/CAPCOA recommended procedure, dated June 21, 1984 ("A Procedure to Implement the Provisions of Health and Safety Code Section 41605.5 Relating to the Determination of Agricultural/Forestry Emission Offset Credits").

7. The emission factors to be used in quantifying the credits granted pursuant to this condition are:

LBS OF POLLUTANT/TON OF FUEL BURNED

Pollutant	Orchard	Field Crop Straws	Vine Crops	Forest Residue
NO _x	4	4.3	4	4
VOC	8	13.0	5	19
PM	6	22.0	5	17
CO	52	130.0	51	140
SO ₂	0.6	2.8	0.6	0.1

8. The applicant shall maintain records of fuel acquired and the mass of fuel burned on a daily basis, including records of fuel blend ratios. In addition, daily records are required of mass, type, and geographic origin of the biomass received, accompanied by certification by the fuel supplier and the owner or operator that any offset-creditable biomass historically has been burned openly in the air basin.

Certification by the owner or operator is required, that all biomass fuel acquired will be burned in the biomass boilers if that fuel has been assigned an emission offset credit in accordance with the conditions of this permit.

9. Emission credits (offsets) shall be provided for the project's emissions in accordance with the ARB/CAPCOA protocol.
10. Any time during which the project's permitted combustion emissions exceed the emissions offset credits as specified in the permit because of a change in the quality or quantity of the wastes supplied, the project owner or operator shall notify the BIA and EPA (Attn: A-3-3) and curtail operations proportionately. Failure to comply with this provision shall be grounds for enforcement actions and revocation of the lease by BIA.
11. All of the above information shall be recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, calculation and record.

12. Each Calendar quarter Colmac Energy, Inc. shall submit all of the above information for the last calendar quarter to EPA (Attn: A-3-3).

M. Offsets During Startup

Colmac shall provide offsets, as required by Condition IX.L.6., during plant startup for any day during startup (startup is the period after initial firing of the boiler or boilers until the plant has operated at 100-percent power for a period of at least 72 hours, and the performance (source) tests for emission measurement have been completed) in which boiler operation takes place. Offsets shall be provided based on the permitted emission rates specified in subsections IX. E, F, G, H and I above, and the BTU's in the fuel combusted that day.

X. Agency Notifications

All correspondence as required by this Approval to Construct/Modify shall be forwarded to:

- A. Director, Air Management Division (Attn: A-3-3)
U.S. Environmental Protection Agency
215 Fremont Street
San Francisco, CA 94105
- B. Chief, Stationary Source Division
California Air Resources Board
P.O. Box 2815
Sacramento, CA 95814
- C. Air Pollution Control Officer
South Coast Air Quality Management District
9150 Flair Drive
El Monte, CA 91731

AMBIENT AIR QUALITY IMPACT REPORT
(NSR 4-4-11, SE 87-01)

I. Applicant

Colmac Energy, Inc.
636 State Street
P.O. Box 250
El Centro, California 92244

II. Project Location

The proposed 49 megawatt (MW) power plant will be constructed on approximately 104 acres situated within the Cabazon Band of Mission Indians Reservation Section 6 in Mecca, Riverside County, California. The project site is bounded on the south by Avenue 64 and on the southwest by the Southern Pacific/Highway 111 transportation corridor. Cabazon Indian Reservation lands are situated to the north, east and northwest of the project site.

The site is located in the South Coast Air Basin with the nearest Class 1 PSD area, Joshua Tree National Monument, located 30 kilometers to the north.

III. Project Description

Colmac Energy's proposed electric power plant will consist of a receiving, storage and conveying system for biomass fuel to be burned in two fluidized bed combustors. Steam generated in the boilers will be sent to a turbine generator for power production. The project is expected to produce a maximum of 49 MW of power for distribution to the Southern California Edison grid system.

Agricultural biomass, municipal maintenance woody residues, and commercial and industrial wood residues will fuel the fluidized bed combustors. Natural gas, propane or other fuels will also be used for boiler start-up and flame stabilization when required. The project includes air pollution control equipment, fire protection equipment, and material handling and storage facilities. The project facilities are described in greater detail below:

A. Steam Generator

The two boilers will be fluidized bed combustors burning biomass and agricultural residue to generate a total of 427,520 lbs/hr steam at 950°F and 1,250 psig

for power generation. Each unit will include the following: fuel metering and feed system, fluidized bed combustor, forced circulation boiler system, air preheater system, bed removal cooling system, bed level control system, bag filter system, auxiliary gas burners (with piping) system, combustion air and flue gas handling system, ammonia injection system, structural steel, platforms, and ladders.

B. Turbine Generator

The function of the turbine generator is to convert the mechanical energy of steam in the turbine to electrical power from the generator. The turbine will be a multistage condensing unit with four uncontrolled extractions driving an air and water cooled electric generator. The turbine generator will include a main stop valve, electrohydraulic control system, emergency overspeed system, gland steam sealing system, turning gear, lube oil and control oil system, turbine control panel, electronic governor control turbine supervisory system, and protective circuit breakers.

C. Fuel Handling System

The fuel handling system includes facilities to receive various fuels, separate oversized fuel particulate from particulates of an acceptable size, hog and/or shred the oversized particulate to acceptable size, transport and stock the fuels as received into outdoor storage piles, reclaim the fuel from outdoor storage, and deliver the fuel to any combination of metering bins at the two power boilers.

Auxiliary facilities are also included in the fuel handling systems to weigh incoming and outgoing fuel delivery tractor trailer trucks, to provide maintenance and refueling for the plant rolling stock, to separate ferrous materials from incoming fuels and fuels being delivered to the boiler metering bin, to detect the presence of and allow for manual separation of nonferrous metals from the incoming fuel flow, and to minimize fugitive dust emission at the truck unloading area, the screening, hog and/or shredders areas, and at the point of fuel feed into the metering bins.

D. Ash Handling System

The function of the ash handling system is to collect bottom and fly ash intermittently and continuously from various sections of each individual fluidized bed combustor and the baghouse filters. Each fluidized bed combustor is

provided with individual ash handling units, and the collected ash is transported into a common total ash storage silo.

The ash handling system consists of dry drag chain conveyors, screw conveyors, and an ash storage silo with an unloader. Ash collected from the fluidized bed combustor bed drain outlets, economizer hoppers, air preheater hoppers, and baghouse filter hoppers is discharged through individual screw conveyors into a common transfer conveyor. It is then transported into a common storage silo via drag chain conveyor and is unloaded through an ash conditioner to a truck for agricultural soil amendment or landfill disposal. Water is used in the conditioner for dust control.

E. Auxiliary Fuel System

The auxiliary fuel system is designed to provide natural gas, propane, or other such gas to each boiler during startup and to augment the biomass fuel in the event of high moisture content. Gas will be supplied from a propane storage tank or storage tank containing other suitable gas. Natural gas will be supplied by the Southern California Gas Company if the gas pipeline is extended to the plant from Coachella.

F. Cooling Water System

The circulating water system consists of two circulating water pumps, cooling tower, piping, valves, and instruments. It is designed to provide cooling water to the main condenser, the closed cooling water heat exchanger, and bed removal cooling screw conveyor.

The cooling tower is an induced draft, counter flow, four cell unit designed to serve as the ultimate heat sink for the plant. Makeup water to the cooling tower basin is supplied by gravity from the raw and fire water tank.

G. Flue Gas Handling and Emissions Control

The flue gas handling and cleaning system for each individual fluidized bed boiler consists of a cyclone, economizer, air preheater, baghouse filter, induced draft fan, inter-connecting ducts and breeching, and a common stack with complete EPA method 5 flue gas monitors. The system is designed to monitor the pollutant level from the stack continuously in accordance with EPA performance specifications delineated in 40 CFR 60.13, 40 CFR Appendix B (Performance Spec. 2), and also 40 CFR 52, Appendix E, and in accordance

with the South Coast Air Quality Management District requirements.

The emission control equipment will be as follows:

- ° A circulating fluidized bed combustor for promotion of complete combustion and minimization of HC and CO emissions.
- ° A system for injection of ammonia into the combustion chamber, which is specifically designed to provide a large turbulent volume at the proper temperature for reaction of the ammonia with oxides of nitrogen to reduce NO_x emissions.
- ° A fabric-filter baghouse for capture of particulate emissions with provision for removing individual groups of filter bags from the gas flow to prevent re-entrainment of dislodged particulate during the cleaning cycle.
- ° A furnace limestone injection system for SO₂ emission control as required by EPA.

IV. Emissions from the Proposed Project

Estimated emissions from the project are based on guarantees provided by the boiler supplier based on consideration of:

- ° combustion effectiveness of the CFB boiler;
- ° worst-case-expected blend of the fuels to be burned;
- ° expected NO_x reduction system effectiveness;
- ° expected SO_x reduction system effectiveness;
- ° expected fuel blend management effectiveness;
- ° results of the pilot scale test burn program conducted by Colmac Energy.

The TSP emission rate is based on guaranteed effectiveness of the fabric filter baghouse so as to produce an outlet grain loading of 0.01 gr/dscf at 12% CO₂.

Emission factors for auxiliary fuel combustion (natural gas or propane) and for fuel handling activities were taken from EPA Publication AP-42, Compilation of Air Pollutant Emission Factors. The estimated controlled emissions are listed in Table 1.

In addition, the applicant proposes to offset project emissions of particulate matter, nitrogen oxides, and hydrocarbons. Offsets will be provided by open-field offset burning credits consistent with the California Air Resources Board-California Air Pollution Control Officers Association protocol dated June 21, 1984.

Table 1

Estimated Controlled Emissions from the Proposed
Colmac Power Plant^a

Pollutant	Estimated Emissions	
	lbs/hour	tons/year
Nitrogen Oxides	60	237
Sulfur Dioxide	24	95
Carbon Monoxide	90	355
Particulate Matter	15	59
Non-Methane Hydrocarbons	20	79

^a Emissions based on 329 days per year of operation (90 percent utilization) and are boiler stack emissions only. For particulate matter, the fuel storage piles, baled fuel cyclone and the cooling tower contribute approximately 28 T/Y of the emissions shown.

Table 2

Estimated Particulate Emissions From Fuel Handling
and Cooling Tower Operations

Source	Estimated Emissions (Tons/Year)
Wheeled Loader	0.23
Fuel Storage Piles	15.6
Cooling Tower	2.5
Baled Fuel Cyclone	9.7

V. Applicability of the Prevention of Significant Deterioration (PSD) Regulations

The Prevention of Significant Deterioration (PSD) regulations (40 CFR 52.21) define a "major source" as any source type belonging to a list of 28 source categories which emits or has the "potential to emit" 100 tons per year or more of any pollutant regulated under the Clean Air Act, or any other source type which emits or has the potential to emit such pollutants in amounts equal to or greater than 250 tons per year. Since this project is not one of the 28 source categories, the 250 ton per year threshold applies.

Under the PSD regulations, significant net emissions increase is defined as a net increase in emissions greater than the threshold prescribed for any pollutant subject to the regulation. The significant thresholds prescribed by the PSD regulations for the subject pollutants are:

<u>Pollutant</u>	<u>Significant Emission Rate</u> <u>ton/year</u>
Carbon Monoxide	100
Nitrogen Oxides	40
Sulfur Dioxide	40
Total Suspended Particulate	25
Ozone	40 of VOC

A PSD review would apply to all pollutants from a major source showing significant net increases in emissions for which the applicable National Ambient Air Quality Standards (NAAQS) have not been exceeded (attainment areas), or areas where the status of the area is uncertain (unclassified). In the desert portion of Riverside County, the location of the proposed project, the NAAQS that have not been exceeded or are unclassified are those applicable to NO₂, SO₂, CO and TSP.

The estimated controlled emissions of these pollutants from the proposed power plant are given in Table 1. Under the PSD regulations, the proposed project is a major source of CO and a significant source of SO₂, NO_x and TSP. Non-methane hydrocarbons will also be emitted in significant quantities, but are not subject to PSD requirements because they are precursors to ozone formation which is a non-attainment pollutant. Therefore, the source is subject to PSD review for CO, SO₂, NO_x, and TSP as follows:

1. Application of Best Available Control Technology (BACT);
2. Analysis of ambient air quality impacts from the project;

3. Analysis of air quality and/or visibility impacts on Class 1 areas; and
4. Analysis of impacts on soils and vegetation.

VI. Best Available Control Technology (BACT)

The PSD regulations require that a determination of BACT be made for each pollutant subject to major review. BACT is defined as " ..an emissions limitation (including a visible emissions standard) based on the maximum degree of reduction of each pollutant subject to regulation under the Act...which the Administrator, on a case-by-case basis, taking into account energy, environmental and economic impacts, and other costs, determines is achievable for such source..."

A. Nitrogen Oxides

The U.S. Environmental Protection Agency document "BACT/LAER Clearinghouse - A Compilation of Control Technology Determinations" contains no listings of external combustion sources using a biomass/wood waste mix for fuel. There are, however, a number of references to wood-fired and bagasse-fired boilers. These previous BACT/LAER determinations for such boilers may apply to the proposed Colmac Energy, Inc. facility, since similar fuels will be used. The nitrogen content of the biomass portion of boiler feed averages about 0.78 percent.

The applicant has evaluated a variety of measures to control nitrogen oxide emissions to the atmosphere. These measures include control of excess combustion air, control of flame temperature, staged combustion, flue gas recirculation, selective catalytic reduction, and ammonia injection. Of these, the applicant has selected temperature control coupled with ammonia injection as providing the probability of most effective NOx control measures. Overall, the boiler manufacturer has guaranteed to meet an NOx production limit of 0.10 pounds per million BTU in the boiler using these control techniques. The "BACT/LAER Clearinghouse" indicates that established BACT for similar installations fueled by wood or bagasse have been at levels ranging from 0.35 pounds to as low as 0.08 pounds per million BTU.

However, these latter lower levels have been established for installations burning wood. It thus appears reasonable to accept a maximum emission rate of 0.10 pounds of NOx per million BTU as BACT.

EPA has concluded that the system for NO_x control described in the applicant's submittal, using temperature control and ammonia injection with a maximum NO_x emission rate of 0.10 pounds per million BTU, and 25 ppm at 12% CO₂ represents Best Available Control Technology for the control of NO_x emissions from the proposed project.

B. Sulfur Dioxide

As previously noted, the EPA BACT/LAER Clearinghouse document does not contain any listings of control technology determinations for biomass/wood-fueled external combustion boilers. However, similar installations burning wood have been issued permits to construct based on limestone injection systems for SO₂ controls, and emission levels of 0.20 pounds per million BTU. The applicant has considered the use of several control options, including wet and dry lime and limestone scrubbing, and limestone injection. None of these approaches have been applied to a biomass/wood boiler. Effectiveness of a lime or limestone scrubbing system decreases significantly as the SO₂ concentration in the flue gas decreases. In the case of the proposed Colmac Energy facility, the average sulfur content of the fuel is relatively low, being approximately 0.13 percent on a dry weight basis.

The applicant has indicated that no SO₂ controls are planned for this facility, but has indicated that SO₂ emissions will not exceed 0.10 pounds per million BTU or 100 parts per million in the flue gas. He has also indicated that a continuous SO₂ monitoring device will be installed in the exhaust stack. The applicant is also willing to retrofit a limestone injection system, if necessary, and provisions have been made in plant design for this possibility.

After considering Colmac Energy's BACT analysis and after reviewing previously issued PSD permits for CFB projects, EPA has concluded that additional SO₂ controls will be necessary. EPA has concluded that a furnace limestone injection system with a maximum emissions rate of 0.04 pounds of SO₂ per million BTU's or 40 ppm in the flue gas represents BACT for the control of SO₂ emissions at the Colmac facility.

C. Carbon Monoxide

As with other pollutants, there is little precedent in control of carbon monoxide from a biomass/wood-fired boiler. In keeping with known boiler technology for the control of CO formed by pyrolysis in the combustion of wood and other biological materials, the applicant proposes to use combustion control to minimize emissions of CO to the atmosphere. This is a compromise measure to balance

CO with NO_x formation at high flame temperatures. Nevertheless, the applicant's proposal to maintain a boiler combustion zone temperature of 1600 to 1800°F is reasonable and should result in relatively complete consumption of CO while keeping excess NO_x production to a minimum. In addition, the effects of CO from the proposed facility on ambient air quality are negligible.

After reviewing the available data EPA has determined that combustion temperature control and good operating techniques as proposed by the applicant and compliance with a CO emission limit of 0.15 pounds per million BTU's or 60 ppm at 12% CO₂ represents BACT for the control of CO emissions from the proposed Colmac Energy project.

D. Particulate

The applicant considered a number of control options, including cyclones, multiclones, wet scrubbers, electrostatic precipitators, and baghouses. Based on expectations for downtime minimization, operating economics, and collection efficiencies, the applicant has selected baghouses as the optimum control choice for this facility, and proposes to limit outlet concentrations of particulates to 0.01 grains per dry standard cubic foot at 12 percent CO₂. This is consistent with BACT determinations for other boiler applications. In addition, the applicant is proposing to control fugitive particulate emissions through the use of a fabric filter on the baled fuel cyclone and by watering the fuel storage pile when wind speed exceeds 12 mph.

EPA has concluded that the use of a baghouse for control of stack particulate emissions and a fabric filter and watering for control of fugitive emissions is Best Available Control Technology for TSP for the Colmac Energy facility.

VII. Air Quality Impacts

The PSD regulations require an air quality analysis to determine the impacts of the proposed project on ambient air quality. The analysis must consider whether the proposed project will cause a violation of (1) the applicable PSD increments, and (2) the National Ambient Air Quality Standards (NAAQS). The proposed facility will be located in a PSD Class II area. The nearest Class I area is Joshua Tree National Monument located 30 km north of the plant site. This area was examined for potential visibility impairment and impacts on the Class I increments resulting from long range transport of project emissions.

A. Existing Air Quality

In order to evaluate whether the emissions from the Colmac Energy power plant will cause violations of the NAAQS, it is necessary to have measurements or estimates of ambient air quality levels in the vicinity of the project site. These levels are needed for each pollutant which will be emitted above the significant emission level (i.e., SO₂, NO_x, CO and TSP).

The PSD regulations provide an exemption (40 CFR 52.21(i)(8)) from monitoring requirements for a particular pollutant if the source can demonstrate that the net emissions increase of the pollutant from the source would not cause, in any area, air quality impacts greater than certain threshold concentrations prescribed by the PSD regulations. The applicable concentrations are given below.

<u>Pollutant</u>	<u>Averaging Period</u>	<u>Monitoring Exemption Concentration (ug/m³)</u>
NO ₂	Annual	14
SO ₂	24-hour	13
CO	8-hour	575
TSP	24-hour	10

Colmac Energy demonstrated in their air quality analysis (see Section VII.B) that, with the exception of TSP, worst-case ground-level concentrations from all criteria pollutants with significant net emission increases would be less than the applicable threshold concentrations listed above. Therefore, the proposed project is exempt from PSD monitoring requirements for NO₂, SO₂, CO, and TSP.

However, in order to assess the impact of a source on the NAAQS, it is necessary to determine the background concentrations of the applicable pollutants. Because the applicant was not required to perform on-site monitoring, the background concentrations were determined from monitoring sites judged to have ambient air quality levels similar to those at the proposed project site.

Air quality measurements taken at the SCAQMD Indio and Palm Springs monitoring stations were used to represent ambient levels in the vicinity of the project site. These data are listed in Table 3. With the exception of TSP, measured concentrations are well below applicable NAAQS. The high TSP levels are most likely attributable to natural sources (windblown dust) and agricultural burning.

B. Predicted Air Quality

The applicant used two EPA-approved dispersion models to perform a screening-level analysis of air quality impacts from the proposed project. The resulting concentrations were used to assess the impact of the project on the NAAQS and PSD increments. The PTPLU model was used to predict short-term ground-level concentrations from the boiler stack. Total suspended particulate impacts from the boiler stack, fuel storage pile, baled fuel cyclone and the cooling tower were predicted using the ISCST dispersion model. The ISCST modeling employed meteorological data which is identical to that used by the PTPLU model. Additional calculations were made to assess potential impacts in complex terrain and during fumigation conditions. The short-term concentrations predicted using the above modeling techniques were used to estimate concentrations of different averaging periods using EPA-recommended conversion factors.

The ambient concentrations predicted for the subject pollutants were added to the monitored background concentrations and the resultant concentrations were compared with the NAAQS as shown in Table 4. The predicted concentrations are compared with the PSD increments in Table 5.

Table 3

Ambient Air Quality in Project Area (ug/m³)

Pollutant	Averaging Period	Maximum Measured Concentration	NAAQS
NO ₂	Annual	51	100
SO ₂	3-hour	26	1,300
	24-hour	26	365
	Annual	3	80
CO	1-hour	8,050	40,000
	8-hour	3,220	10,000
TSP	24-hour	606	150
	Annual	102	60

Table 4

Modeled Air Quality Impacts from the
Proposed Colmac Power Plant
(ug/m3)

Pollutant	Averaging Time	Maximum Predicted Impact	Maximum Impact Plus Background	NAAQS	PSD Monitoring Threshold
NO ₂	Annual	3	54	100	14
SO ₂	3-hour	10.8	37	1300	-
	24-hour	4.8	31	365	13
	Annual	1.2	4	80	-
CO	1-hour	135	8185	40000	-
	8-hour	32	3252	10000	575
TSP	24-hour	3	609	150	10
	Annual	0.8	103	60	-

Table 5

Modeled Air Quality Impacts on the PSD Increments
(ug/m3)

Pollutant	Averaging Time	Maximum Concentrations	PSD Increment
<u>Class II Area</u>			
SO ₂	3-hour	10.8	512
	24-hour	4.8	91
	Annual	1.2	20
TSP	24-hour	3	37
	Annual	0.8	19
<u>Class I Area</u>			
SO ₂	3-hour	0.7	25
	24-hour	0.3	5
	Annual	0.1	2
TSP	24-hour	0.2	10
	Annual	0.1	5

VIII. Additional Impact Analysis

In addition to assessing the ambient air quality impacts expected from a proposed new source or modification, the PSD regulations require that certain other impacts be considered. These additional impacts are those on visibility, soils and vegetation.

A. Visibility

The PSD regulations require that PSD permit applications address the potential impairment to visibility in Class I areas. The proposed project is approximately 30 km from the nearest Class I area, Joshua Tree National Monument. A visibility assessment was conducted using EPA's Level-1 screening analysis. The screening procedures involved calculations of three plume contrast coefficients. According to the procedure, should the calculated coefficients have an absolute value greater than the 0.10 significance value, a more refined analysis is required. The calculated contrast values at Joshua Tree National Monument were all significantly less than 0.10. Results showed C_1 , C_2 and C_3 values of 0.007, 0.006 and 0, respectively. Since the contrast values were significantly less than 0.10, it is unlikely that the proposed project would adversely impair visibility at the Joshua Tree National Monument.

B. Soils and Vegetation

The PSD regulations require an analysis of the impact the emissions from a major source may have on soils and vegetation having significant commercial or recreational value. Since the predicted impacts from the facility are minor, and due to the lack of vegetation having significant commercial or recreational value in the areas of greatest impact, no discernible impact on soils or vegetation is expected to result from the Colmac Energy project.

IX. Endangered Species Act

Pursuant to Section 7 of the Endangered Species Act, EPA is required to initiate consultation with the Fish and Wildlife Service (FWS) if any action, including permit issuance, might jeopardize the continued existence of endangered or threatened species or adversely modify their critical habitat.

Both the applicant and the EPA contacted FWS regarding the Endangered Species Act. The FWS concluded that the proposed facility would not impact any sensitive species.

IX. Conclusions and Proposed Action

Based on the information supplied by the applicant, Colmac Energy, Inc., and the analyses conducted by EPA, it is the preliminary determination of the EPA that the proposed project will employ Best Available Control Technology and will not cause or contribute to a violation of the NAAQS for NO₂, SO₂, CO and TSP or the PSD increment for SO₂ and TSP. Therefore, EPA intends to issue an approval to construct, subject to the following conditions.

Permit Conditions

I. Permit Expiration

This Approval to Construct/Modify shall become invalid (1) if construction is not commenced (as defined in 40 CFR 52.21(b)(8)) within 18 months after the approval takes effect, (2) if construction is discontinued for a period of 18 months or more, or (3) if construction is not completed within a reasonable time.

II. Notification of Commencement of Construction and Startup

The Regional Administrator shall be notified in writing of the anticipated date of initial start-up (as defined in 40 CFR 60.2(o)) of each facility of the source not more than sixty (60) days nor less than thirty (30) days prior to such date and shall be notified in writing of the actual date of commencement of construction and start-up within fifteen (15) days after such date.

III. Facilities Operation

All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this Approval to Construct/Modify shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions.

IV. Malfunction

The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in Section IX of these conditions. In addition, the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section IX of these conditions, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause.

V. Right to Entry

The Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local air pollution control agency, and/or their authorized representatives, upon the presentation of credentials, shall be permitted:

- A. to enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of this Approval to Construct/Modify; and
- B. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this Approval to Construct/Modify; and
- C. to inspect any equipment, operation, or method required in this Approval to Construct/Modify; and
- D. to sample emissions from the source.

VI. Transfer of Ownership

In the event of any changes in control or ownership of facilities to be constructed or modified, this Approval to Construct/Modify shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of this Approval to Construct/Modify and its conditions by letter, a copy of which shall be forwarded to the Regional Administrator and the State and local Air Pollution Control Agency.

VII. Severability

The provisions of this Approval to Construct/Modify are severable, and, if any provision of this Approval to Construct/Modify is held invalid, the remainder of this Approval to Construct/Modify shall not be affected thereby.

VIII. Other Applicable Regulations

The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable Federal, State and local air quality regulations.

IX. Special Conditions

A. Certification

Colmac Energy, Inc. shall notify the EPA in writing of compliance with Special Conditions IX.B. and IX.J. and shall make such notification within fifteen (15) days of such compliance. This letter must be signed by a responsible representative of Colmac Energy, Inc.

B. Air Pollution Control Equipment

Colmac Energy, Inc. shall install, continuously operate and maintain the following air pollution controls to minimize emissions. Controls listed shall be fully operational upon startup of the proposed equipment.

1. Each boiler will exhaust to a fabric baghouse for the control of particulate emissions (TSP).
2. Each boiler shall be equipped with a limestone injection system for the control of SO_2 and acid gas emissions (H_2SO_4).
3. Each boiler shall be equipped with an ammonia injection system for the control of NO_x emissions.
4. The baled fuel cyclone shall be equipped with a fabric filter for control of particulate emissions.

C. Performance Tests

1. Within 60 days of achieving the maximum production rate of the proposed equipment but not later than 180 days after initial startup of the equipment as defined in 40 CFR 60.2(o), and at such other times as specified by the EPA, Colmac Energy, Inc. shall conduct performance tests for NO_x , SO_2 , TSP and CO and furnish the EPA (Attn: A-3-3) a written report of the results of such tests. The tests for NO_x , SO_2 , TSP and CO shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. Upon written request (Attn: A-3-3) from Colmac Energy, Inc., EPA may approve the conducting of performance tests at a lower specified production rate. After initial performance tests and upon written request and

adequate justification from Colmac Energy, Inc., EPA may waive a specified annual test for the biomass-fired facility.

2. Performance tests for the emissions of SO_2 , TSP, NO_x , and CO shall be conducted and the results reported in accordance with the test methods set forth in 40 CFR 60, Part 60.8 and Appendix A. The following test methods shall be used:
 - a. Performance tests for the emissions of SO_2 shall be conducted using EPA Methods 1-4 and 8.
 - b. Performance tests for the emissions of TSP shall be conducted using EPA Methods 1-4 and 5.
 - c. Performance tests for the emissions of CO shall be conducted using EPA Methods 1-4 and 10.
 - d. Performance tests for the emissions of NO_x shall be conducted using EPA Methods 1-4 and 7.
 - e. Performance tests for the emissions of hydrocarbons shall be conducted using EPA Methods 1-4 and 25.

The EPA (Attn: A-3-3) shall be notified in writing at least 30 days prior to such tests to allow time for the development of an approvable performance test plan and to arrange for an observer to be present at the test.

Such prior approval shall minimize the possibility of EPA rejection of test results for procedural deficiencies. In lieu of the above-mentioned test methods, equivalent methods may be used with prior written approval from the EPA.

3. For performance test purposes, sampling ports, platforms and access shall be provided by the Colmac Energy, Inc. on the boiler exhaust systems in accordance with 40 CFR 60.8(e).

D. Operating Limitations

1. Only natural gas may be fired by the auxiliary burners.
2. Treated wood or wood wastes and coal or coal byproducts shall not be used as a fuel by this facility.
3. Plant operation shall not exceed 7884 hours per calendar year.
4. The annual input of biomass fuel (agricultural wastes, commercial woodwastes, straw, bermuda grass, asparagus ferns, orchard prunings) to the two (2) boilers shall not exceed 400,000 "wet" tons.

5. The Colmac Energy, Inc. shall record and maintain records of the amounts and types of biomass fuel fired each calendar quarter, the amount of natural gas fired each calendar quarter, and the plant hours of operation. All information shall be recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, calculation and record.
6. When wind speeds exceed 12 mph, Colmac Energy, Inc. shall control particulate emissions from the fuel storage pile through the use of regular watering.

E. Emission Limits for SO₂

On and after the date of startup, Colmac Energy, Inc. shall not discharge or cause the discharge into the atmosphere SO₂ in excess of the more stringent of 12.0 lbs/hr per boiler or 40 ppm, dry, corrected to 12% CO₂ (3-hour average).

EPA may set a new lower allowable emission rate for the above emission limits after reviewing the performance test results or the initial SO₂ monitoring data required under Special Conditions C and J.

If the SO₂ emission limit is revised, the difference between the SO₂ emission limit set forth above and a revised lower SO₂ emission limit shall not be allowed as an emission offset for future construction or modification.

F. Emission Limits for TSP

On and after the date of startup, Colmac Energy, Inc. shall not discharge or cause the discharge of TSP in excess of the more stringent of 0.010 gr/dscf at 12% CO₂ or 7.5 lbs/hr per boiler (3-hour average).

On and after the date of startup, Colmac Energy, Inc. shall not discharge or cause the discharge into the atmosphere from the boiler exhaust stack gases which exhibit an opacity of 10 percent or greater for any period or periods aggregating more than three minutes in any one hour.

G. Emission Limits for CO

On and after the date of startup, Colmac Energy, Inc. shall not discharge or cause the discharge of CO in excess of the more stringent of 45.0 lb/hr per boiler or 60 ppm, dry, corrected to 12% CO₂ (3-hour average).

H. Emission Limits for NO_x

On and after the date of startup, Colmac Energy, Inc. shall not discharge or cause the discharge of NO_x in excess of the more stringent of 30.0 lbs/hr per boiler or 25 ppm, dry, corrected to 12% CO₂ (3-hour average).

I. Emission Limit for Hydrocarbons

On and after the date of startup, Colmac Energy, Inc. shall not discharge or cause the discharge of hydrocarbons in excess of 10.0 lbs/hr per boiler (3-hour average).

J. Continuous Emission Monitoring

1. Prior to the date of startup and thereafter, Colmac Energy, Inc. shall install, maintain and operate the following continuous monitoring systems in the boiler exhaust stack:
 - a. Continuous monitoring systems to measure stack gas SO₂, CO and NO_x concentrations. The system shall meet EPA monitoring performance specifications (40 CFR 60.13 and 40 CFR 60, Appendix B, Performance Specifications 2, 3 and 4).
 - b. A continuous monitoring system to measure stack gas volumetric flow rates. The system shall meet EPA performance specifications (40 CFR Part 52, Appendix E).
 - c. A transmissometer system for continuous measurement of the stack gas opacity. The system shall meet EPA monitoring performance specifications (40 CFR Part 60.13 and 40 CFR Part 60, Appendix B, Performance Specification 1).
2. Colmac Energy, Inc. shall maintain a file of all measurements, including continuous monitoring systems evaluations; all continuous monitoring systems or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; performance and all other information required by 40 CFR 60 recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports and records.
3. Colmac Energy, Inc. shall notify EPA (Attn: A-3-3) of the date which demonstration of the continuous monitoring system performance commences (40 CFR 60.13(c)). This date shall be no later than 60 days after startup.

4. Colmac Energy, Inc. shall submit a written report of all excess emissions to EPA (Attn: A-3-3) for every calendar quarter. The report shall include the following:
 - a. The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factors used, and the date and time of commencement and completion of each time period of excess emissions.
 - b. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the furnace/boiler system. The nature and cause of any malfunction (if known) and the corrective action taken or preventive measures adopted shall also be reported.
 - c. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks, and the nature of the system repairs or adjustments.
 - d. When no excess emissions have occurred or the continuous monitoring system has not been inoperative, repaired, or adjusted, such information shall be stated in the report.
 - e. Excess emissions shall be defined as any 3-hour period during which the average emissions of SO₂, NO_x, CO and opacity, as measured by the CEM, exceeds the maximum emission limits set forth in Conditions IX.E., IX.F, IX.G and IX.H. above.
5. Excess emissions indicated by the CEM system shall be considered violations of the applicable emission limit for the purposes of this permit.
6. Not less than 90 days prior to the date of startup of the facility, Colmac Energy, Inc. shall submit to the EPA (Attn: A-3-3) a quality assurance project plan for the certification and operation of the continuous emission monitors. Such a plan shall conform to the EPA document "Guidelines for Developing a Quality Assurance Project Plan" (QAMS 005/80). Continuous emission monitoring may not begin until the QA project plan has been approved by EPA Region 9.

* * * PUBLIC NOTICE * * *

OF A DRAFT PERMIT WHICH REGULATES THE
EMISSION OF AIR POLLUTANTS
AND
OF A PUBLIC HEARING BY
THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 9
215 Fremont Street
San Francisco, CA 94105

The Region 9 office of the United States Environmental Protection Agency (EPA) requests public comment and will hold a PUBLIC HEARING on a DRAFT PERMIT which would grant conditional approval, in accordance with the Federal Prevention of Significant Deterioration (PSD) Regulations (40 CFR 52.21), to Colmac Energy, Inc., 636 State Street, El Centro, CA 92244 for the construction and operation of a 49 megawatt biomass fired power plant. The facility will be located within the Cabazon Band of Mission Indians Reservation, Section 6, in Mecca, Riverside County, California.

It is the preliminary determination of the EPA that the proposed project will employ Best Available Control Technology for all subject pollutants, taking into account energy, environmental, and economic impacts, including impacts from pollutants unregulated by the Clean Air Act. EPA has also determined that emissions from the proposed facility will not have a significant impact on air quality.

If this DRAFT PERMIT becomes final, and there is no appeal, operation of the facility identified above may proceed, subject to the conditions of the permit and other applicable permit and legal requirements.

The PUBLIC HEARING will be held as follows:

DATE: Thursday, February 11, 1988
TIME: 7:00 p.m.
PLACE: Coachella Valley High School Auditorium
83800 Airport Boulevard (Airport Blvd and Van Buren)
Thermal, California

Comments will be received on whether or not a permit should be issued, and suitable terms for a permit if one is issued. The PUBLIC HEARING will be conducted pursuant to 40 CFR 124.10.

The administrative record required by 40 CFR 124.9, including the application and the DRAFT PERMIT, together with data submitted by the applicant, is located at EPA, Region 9, and is available for public inspection.

Copies of the application, DRAFT PERMIT, and the EPA AMBIENT AIR QUALITY IMPACT REPORT may also be inspected at:

Coachella Branch
Riverside County Library
1538 7th Street
Coachella, California
Hours: M - 2:00 p.m. - 7:00 p.m.
T, TH - 10:00 a.m. - 6:00 p.m.
Sat - 10:00 a.m. - 2:00 p.m.

Palm Springs Main Library
300 S. Sunrise Way
Palm Springs, California
Hours: M,T,W,Sat - 9:00 a.m. - 5:00 p.m.
Th - 9:00 a.m. - 8:00 p.m.
F - 10:00 a.m. - 5:30 p.m.

Copies of the EPA AMBIENT AIR QUALITY IMPACT REPORT, the DRAFT PERMIT and other pertinent information may be obtained at the South Coast Air Quality Management District, 9150 Flair Drive, El Monte, CA 91731 or by calling Linda Barajas at (415) 974-8221 or by writing to:

Linda Barajas (A-3-1)
EPA, Region 9
215 Fremont Street
San Francisco, CA 94105

All interested persons are invited to express their views at the PUBLIC HEARING. Persons wishing to make comments may submit them in writing or may appear at the hearing, or both.

Oral statements at the hearing will be received and considered, but for accuracy of the record, all important testimony should be submitted in writing. Oral statements should summarize any extensive written materials so that there will be time for all interested persons to be heard. A record of the proceedings will be made for consideration by EPA before final action is taken. All substantive questions or comments will be responded to in the document accompanying the final permit decision. The hearing may be continued from time to time or to a different place, after its commencement, to accommodate the needs of witnesses or the EPA, by an announcement at the hearing by the Presiding Officer.

If written comments on the DRAFT PERMIT are not submitted at the PUBLIC HEARING, they must be sent or delivered to Linda Barajas at the address shown above in time to be received before the close of business on February 18, 1988.

Pursuant to 40 CFR 124.13, all persons who wish to comment on the DRAFT PERMIT must raise all reasonably ascertainable issues

and submit all reasonably available arguments and factual statements, including supporting material (unless already a part of the administrative record) by the end of the comment period (February 18, 1988). Comments received during the public comment period will be considered in making a decision on the application. Any issues, facts, or arguments not raised during the public comment period, may not be considered in the decision on the application and may not be considered in any administrative or judicial review of that decision.

A final decision to set the conditions of and issue a FINAL PERMIT, or to deny the application for a permit, shall be made after all comments have been considered. Notice of the final decision shall be sent to each person who has submitted oral or written comments or requested notice of the final permit decision. The decision will become effective 30 days from the date of issuance unless:

1. A later effective date is specified in the decision; or
2. the decision is appealed to the Administrator of EPA pursuant to 40 CFR 124.19 (Any person who submits written comments on the DRAFT PERMIT or who participates in the PUBLIC HEARING may petition the Administrator to review any part of the permit decision within 30 days after the decision has been issued. Any person who failed to file comments and failed to participate in the PUBLIC HEARING on the DRAFT PERMIT may petition for review by the Administrator only those parts of the final permit decision which are different than the DRAFT PERMIT); or
3. there are no comments requesting a change to the DRAFT PERMIT, in which case the final decision shall become effective immediately upon issuance.

All persons who may be interested in attending the public hearing and/or submitting comments on the DRAFT PERMIT, can contact Colleen McKaughan, Environmental Protection Specialist, at (415) 974-8209, or Bob Baker, Environmental Engineer, at (415) 974-8923 for more information.

Please bring this notice to the attention of all persons who would be interested in this matter.

* * * CORRECTED NOTICE * * *

* * * PUBLIC NOTICE * * *

OF A DRAFT PERMIT WHICH REGULATES THE
EMISSION OF AIR POLLUTANTS
AND
OF A PUBLIC HEARING BY
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83800 Airport Boulevard (Airport Blvd and Van Buren)
Thermal, California

Comments will be received on whether or not a permit should be issued, and suitable terms for a permit if one is issued. The PUBLIC HEARING will be conducted pursuant to 40 CFR 124.10.

The administrative record required by 40 CFR 124.9, including the application and the DRAFT PERMIT, together with data submitted by the applicant, is located at EPA, Region 9, and is available for public inspection.

Copies of the application, DRAFT PERMIT, and the EPA AMBIENT AIR QUALITY IMPACT REPORT may also be inspected at:

Coachella Branch
Riverside County Library
1538 7th Street
Coachella, California
Hours: M - 2:00 p.m. - 7:00 p.m.
T, TH - 10:00 a.m. - 6:00 p.m.
Sat - 10:00 a.m. - 2:00 p.m.

Palm Springs Main Library
300 S. Sunrise Way
Palm Springs, California
Hours: M,T,W,Sat - 9:00 a.m. - 5:00 p.m.
Th - 9:00 a.m. - 8:00 p.m.
F - 10:00 a.m. - 5:30 p.m.

Copies of the EPA AMBIENT AIR QUALITY IMPACT REPORT, the DRAFT PERMIT and other pertinent information may be obtained at the South Coast Air Quality Management District, 9150 Flair Drive, El Monte, CA 91731 or by calling Linda Barajas at (415) 974-8221 or by writing to:

Linda Barajas (A-3-1)
EPA, Region 9
215 Fremont Street
San Francisco, CA 94105

All interested persons are invited to express their views at the PUBLIC HEARING. Persons wishing to make comments may submit them in writing or may appear at the hearing, or both.

Oral statements at the hearing will be received and considered, but for accuracy of the record, all important testimony should be submitted in writing. Oral statements should summarize any extensive written materials so that there will be time for all interested persons to be heard. A record of the proceedings will be made for consideration by EPA before final action is taken. All substantive questions or comments will be responded to in the document accompanying the final permit decision. The hearing may be continued from time to time or to a different place, after its commencement, to accommodate the needs of witnesses or the EPA, by an announcement at the hearing by the Presiding Officer.

If written comments on the DRAFT PERMIT are not submitted at the PUBLIC HEARING, they must be sent or delivered to Linda Barajas at the address shown above in time to be received before the close of business on February 18, 1988.

Pursuant to 40 CFR 124.13, all persons who wish to comment on the DRAFT PERMIT must raise all reasonably ascertainable issues

and submit all reasonably available arguments and factual statements, including supporting material (unless already a part of the administrative record) by the end of the comment period (February 18, 1988). Comments received during the public comment period will be considered in making a decision on the application. Any issues, facts, or arguments not raised during the public comment period, may not be considered in the decision on the application and may not be considered in any administrative or judicial review of that decision.

A final decision to set the conditions of and issue a FINAL PERMIT, or to deny the application for a permit, shall be made after all comments have been considered. Notice of the final decision shall be sent to each person who has submitted oral or written comments or requested notice of the final permit decision. The decision will become effective 30 days from the date of issuance unless:

1. A later effective date is specified in the decision; or
2. the decision is appealed to the Administrator of EPA pursuant to 40 CFR 124.19 (Any person who submits written comments on the DRAFT PERMIT or who participates in the PUBLIC HEARING may petition the Administrator to review any part of the permit decision within 30 days after the decision has been issued. Any person who failed to file comments and failed to participate in the PUBLIC HEARING on the DRAFT PERMIT may petition for review by the Administrator only those parts of the final permit decision which are different than the DRAFT PERMIT); or
3. there are no comments requesting a change to the DRAFT PERMIT, in which case the final decision shall become effective immediately upon issuance.

All persons who may be interested in attending the public hearing and/or submitting comments on the DRAFT PERMIT, can contact Colleen McKaughan, Environmental Protection Specialist, at (415) 974-8209, or Bob Baker, Environmental Engineer, at (415) 974-8923 for more information.

Please bring this notice to the attention of all persons who would be interested in this matter.